Software for Environmental Awareness

July 2001

New Products

14 New HTML Programs

With our latest releases, the entire set of original Farm*A*Syst questionnaires for protecting ground water have now been adapted for the Web. The last titles added are: Improving Silage Storage on the Farm, Well Water Location & Condition on the Farm, and Hazardous Waste Management on the Farm. We've added interactive self-evaluation questionnaires to the other Farm*A*Syst programs.

And two long time favorites, Residential Water Conservation and Erosion Best Management Practices are now Web-ready. We've also added QTVR virtual reality panoramas to the hospital tour on Mercury Reduction in Medical Facilities. Check out our new releases on www.epa.gov/seahome!

Oilspill Exercise Generator

If you're planning an oil spill exercise or response drill, the Exercise Generator can help you complete the task in a matter of hours. It also contains evaluation checklists for each of the elements listed in the National Preparedness for Response Exercise Program (PREP).

Excercise Development

» Develop an exercise for spills on land or inland waters based on one of the scenarios supplied in the database, or write your own scenario from scratch.
» Use the seasonal weather data for all US States and Territories, and Canada, or customize it.
» Select implementation messages which are delivered throughout the course of the exercise to move the activity along.
» Add appropriate references to customize the scenario and messages to a locality.

Evaluation Checklists

Fill them out in the program, on a laptop, then transfer the text into a word processor to compile your evalluation report. Or print the evaluation checklists and fill them out on paper.

Audiences

» State and local agencies which conduct oil spill response exercises
» Businesses and industries which must develop emergency response plans
» Small communities

Requires Windows 95 or later and 530MB on hard drive. For ordering information, see www.epa.gov/seahome/oilspill.html

Private Pesticide Applicator Training

This is an interactive guide to the Federal regulatory requirements and user health concerns for pesticide handling and application. It includes an extended tutorial on pesticide laws and regulations, a guide to safe handling and mixing, and a short course in reading and interpreting the labels and health warnings. It also features a comprehensive test and slide shows with English or Spanish soundtracks.

The program can be used as a preparation, actual course material, or a followup tool for required FIFRA retraining or recertification. It comprises about 40% of the content of the Indiana CES FIFRA classroom course. While some particulars are based upon State of Indiana requirements, the bulk of the program is universally relevant and shows wise practices appropriate anywhere in the world.

Employers of handlers and applicators can use it as part of a program for training new hires, especially for individuals starting in the middle of the growing season. The slide shows provide a quick way to educate new workers. The program clearly explains pesticide laws and safe health practices. It offers significant economic benefits for employers by protecting worker health and encouraging appropriate levels of application.

Practical Tools

Environmental Assessment Case Study (EACASE)

This program is a companion piece to the Environmental Assessment Resource Guide. It takes a real-life example of an environmental impact assessment and leads the user through the environmental assessment process. The program is enhanced with maps, photos, interviews, and simulated flyovers of the project area. The Case Study links to the Resource Guide, and contains workbook-style exercises and a notebook for the user to record notes. Together these two programs provide a solid foundation in environmental assessment. *Due to its size, this program is only available on CD-ROM; see p. 8 for information on Purdue CDs.*

Environmental Assessment Resource Guide (EARG)

EARG is a generic source of information to help one conduct environmental assessments of virtually any type of project. Topics covered include scoping, generation of alternatives, impact identification and analysis, mitigation, decision making, and post-decision analysis. Of particular interest are the World Bank Mitigation Tables which treat a variety of project types. SVGA photos enhance and illustrate this landmark program.

Environmental Planning for Small Communities (TRILOGY)

This program offers a complete one-stop introduction to a wide range of environmental issues and decisions that affect small to medium-sized communities. It offers communities the chance to judge their own needs and preferences, and to make informed decisions on their own. Major sections cover:

1. Environmental laws and regulations
2. Self-assessment
3. Planning and comparative risk analysis
4. Financial tools and financial self-analysis
5. Case studies
6. Contact and information directory

Each section includes interactive tools, such as a notebook tool to fill in and save survey forms and keep notes. The program combines and integrates numerous publications from Federal agencies and States like Iowa, Minnesota, Montana, and Utah. The result is a user-friendly product that combines the virtues of an encyclopedia and a Swiss army knife!

EPA Grant Writing Tutorial (GRANTS)

If you're considering applying for an EPA grant, this interactive HTML software tool could make the process a little easier. It walks users through the grant writing process and helps them learn to write more competitive grants. The program includes:

» detailed information and tips on writing a grant proposal;
» how to complete a grant application package (including detailed directions for the forms);
» program-specific sections on three EPA grant programs (Environmental Education, Environmental Justice, Environmental Justice Through Pollution Prevention)
» examples of good, complete grant packages;
» references;
» a glossary of terms;
» resources and contacts;
» a mock grant-writing activity where users are able to compare their results to a successful grant application.

Environmental Education

Great Lakes Adventure (GLADVENT)

This program is a first in several ways: it's aimed at a youth audience (grades 9-12), it will run on both Wintel and Mac computers, and it comes in Teacher and Student versions.

Take a virtual tour of the Great Lakes. Explore some of the environmental issues facing Great Lakes communities today. Investigate the natural history of the basin, the water cycle, stratification and turnover of the lakes. Explore six Hot Topics:

%   Habitat loss
%   Beach closures
%   Fish communities
%   Toxics
%   Exotic Species
%   Eutrophication

You can visit the EPA's research vessel Lake Guardian, deck by deck with virtual reality panoramas. The tour includes the ship's state of the art scientific equipment for monitoring and analysis.

Once you've explored a bit, assume the role of a scientist to solve an environmental mystery. You'll have free run of the Lake Guardian's sampling equipment and labs. You'll want to bring your research journal to help you field some tough questions at the final press conference!

Electronic Wetlands Herbarium (WETHERB)

Two versions are available. The **1993 Midwest Edition** provides a detailed look at the plants typical of 11 different wetland types from bog to wet prairie. Users can explore a list of species found in each type of ecosystem. Entries give detailed botanical information as well as an identification quality photograph of the plant. *This program is available online at www.epa.gov/seahome/wetherb.html.* The **1995 Update for Continental USA** contains the same detailed information as the 1993 edition, but is structured to help identify plant specimens, and expanded to include species found

throughout the continental US. Users answer a series of questions about their specimen to narrow down their choices to a small list. *Due to its size, this program is only available on the Purdue CD-ROM Vol. 1; see p. 8 for information on Purdue CDs.*

Conservation

Residential Water Conservation Techniques (WATCON, SPANCON)

Save water inside and outside the house using water efficient devices. Calculates retrofitting savings. English/Spanish.

Residential Energy Efficiency (ENERGY)

This program shows effective ways to reduce home energy consumption. Topics include insulation, windows, doors, weatherstripping, and caulking. The expert system feature allows users to calculate how much they will save by making their homes more energy efficient. After you enter information about your home and the energy-saving changes you intend to make, the program uses local utility and climate data to calculate your savings in money, energy, and reduction of pollutants.

Water Efficient Landscape Planner (LANDSCP, SPANLAND)

Water efficient landscaping: basics of landscape planning, select most appropriate plants for homeowners. English/Spanish

Pollution Prevention (PREVENT)

Pollution Prevention Act of 1990 addresses P2 in industry, agriculture, energy, government, and consumer sectors. Case studies.

Agriculture

Decentralized Onsite Management for Treatment of Domestic Wastes (DECENT)

This program provides operation and maintenance information for onsite wastewater treatment systems such as septic systems.

Best Management Practices for Soil Erosion (EROSION)

Best management practices & structural techniques to control soil erosion.

Fertilizer Storage & Handling Practices on the Farm (FARMFERT, SPANFERT)

Overview of fertilizer handling and storage, interactive risk assessment, recommendations for correcting storage problems. English/Spanish

Petroleum Storage Practices on the Farm (FARMFUEL)

Overview of proper fuel storage, interactive risk assessment gives recommendations for correcting storage problems.

Pesticide Storage & Handling Practices on the Farm (FARMPEST, SPANPEST)

Pesticide handling and storage, interactive risk assessment, recommendations for correcting storage problems. English/Spanish

Soil and Geologic Site Evaluation (FARMSITE)

Ground water protection overview: roles of soils, geology, depth to water table. Risk assessment for contamination potential.

Hazardous Waste Management on the Farm (FARMHAZ)

Proper hazardous waste management: regulations, different disposal methods, and how to provide a safer environment. Interactive risk assessment helps you identify high risk practices on your farm.

Livestock Manure Handling (MANURE-HANDLE)

Overview of manure types and proper management systems for animals from cattle to swine. Interactive risk assessment plus suggestions for reducing the threat to your water supply. (Previously titled Livestock Yards Management)

Livestock Manure Storage (MANURE-STORE)

Interactive risk assessment of threats to surface and ground water from manure storage practices. Provides suggestions to improve manure storage systems. Covers biological treatment, planning a system, storage facilities, and livestock manure hazards. (Previously titled Livestock Waste Storage)

Milking Center Wastewater Treatment (MILKING)

Design milking facilities to receive, treat, safely dispose of wastewater. Interactive risk assessment & improvement suggestions.

Improving Silage Storage on the Farm (SILAGE)

To prevent possible well contamination, silos should be located as far away from wells as practical. General overview of silage storage, interactive risk assessment, and recommendations for correcting silage storage problems.

DOS PROGRAMS:
Agricultural Pollution Prevention (AGPP)

Shows how to save money and reduce pollution by sensible use of fertilizers, pesticides and herbicides.

Worker Protection Standard 1995 (PESTREGS)

Pesticide applicator regulations: search for information on workers, handlers, ag employers, handler employers, owners.

Toxics

Lead in the Environment
(LEADENV, SPANLEAD)

Testing children for lead poisoning, sources of lead, health effects, techniques for reducing exposure at home. English/Spanish.

Mercury in Medical Facilities
(MERCURY)

Teaches about the hazards of mercury as commonly used in medical care facilities, especially hospitals and clinics. Mercury can pose a significant health problem for health care professionals, and for patients and the environment in general. The program explains the impact of mercury on human health and the integrity of ecosystems, and a 'virtual hospital' (now featuring virtual reality panoramas) shows sources of mercury and their alternatives. Provides detailed survey and self-audit materials, along with case studies from the Mayo Clinic and other locations.

Household Waste Management (HWASTE)

This HTML program teaches the user how to safely and efficiently manage waste, and particularly hazardous waste, in the home. Users can visit a 'virtual house' and choose extended discussions of the many products they might encounter there. Safe homemade alternatives are presented and evaluated. An enormous state-by-state database of mail, telephone, and Internet contacts puts users in touch with a wealth of free downloadable publications. Includes over 30 quizzes and activities for K-12 students, sorted by grade level.

Chemical Contamination in Fish (FISH)

We have produced a Windows update of the original FISH program. It contains video clips illustrating concepts such as concepts such as bioaccumulation, and new photos and video of target species. Included are an updated list of contaminants from 1997 guidance, as well as references to an online database of fish advisories and State contacts. *Due to its size, this program is only available on CD-ROM; see p. 8 for information on Purdue CDs.*

DOS PROGRAMS:

RCRA Boiler & Industrial Furnace Regulations (BIF)

Understand the applicability, terms, technology and requirements of the BIF rule which regulates the burning of hazardous waste in boilers and industrial furnaces (BIFs)

RCRA Corrective Action Process (CAP)

Corrective action for handling hazardous wastes: interim & stabilization measures, QA plans, health & ecological assessment, remediation technologies, public participation, statutory authorities.

Comparative Risk Assessment (COMPRISK)

Methodology identifies greatest environmental risks and prioritizes environmental problems. History, methodology, case studies.

Indoor Air Quality (INDOOR)

Pollutant sources, health risks, how to reduce pollution levels. Building cross-sections offer pollutant tours of typical home or office.

Stratospheric Ozone Depletion (OZONE)

Causes and effects of ozone depletion, ozone hole, greenhouse effect, and how an individual can help prevent ozone depletion.

Water

Ground Water Primer
(GWPRIMER)

This program educates users about the nature of ground water and the principles of ground water protection. It contains a detailed introduction to hydrogeology, information on numerous drinking water contaminants, and a section on what you can do to protect your ground water. You can learn about ground water protection programs in EPA and other government agencies, and find EPA contacts and hotline numbers. A useful reference for high school earth science.

UIC Class V Injection Wells (INJECT)

Class V injection wells, why they exist, why they may pose a danger to the environment, their safe operation and maintenance.

Onsite Waste Disposal with Septic Systems (ONSITE)

Basics of on-site treatment: septic tanks, drainfields, mounds, water conservation. Treatment, design, and siting, soil basics.

Private Water Systems (PRIVATE/SPANPRIV)

Design and construction of private drinking water systems (wells and piping). English/Spanish.

Well Location & Condition (WELLOC)

Well contamination may occur from farmstead activities near drinking water wells. The condition of your well and its proximity to pollution sources determine how much of a risk each source poses to the water you drink. This program contains information useful for identifying and correcting high-risk management and site conditions, and a water well risk assessment program.

Water-Effect Ratio for Metals (WER)

Based on EPA's 1994 "Interim Guidance on the Determination and Use of Water-Effect Ratios (WERs) for Metals." The WER procedure is one of three protocols which may be used to derive site-specific water quality criteria for the protection of aquatic life. An overview, two methods for determining WERs, a checklist, the Guidance document. (Assumes familiarity with water quality standards and criteria and scientific methods.)

Water Quality Standards & Criteria (WQS)

Water quality standards (WQS) provide a framework for maintenance and improvement of water quality when adopted by States, U.S. Territories, and Indian Tribes. This software presents the three components of State and Tribal water quality standards:

» waterbody uses (e.g. swimming, boating)
» water quality criteria or limits on chemical concentrations that may be present the waterbody
» antidegradation policy to protect existing water quality

Relevant sections of the Clean Water Act are included, along with information on use attainability analysis, the submittal/approval process, implementation, and public involvement. Includes examples.

DOS PROGRAMS:

Municipal Pollution Prevention Diagnostic Planner (CMAR)

User supplies WWTP operation & maintenance info (influent loadings, failures/upsets); program rates potential problems, creates report.

Lead in Drinking Water (LEADDW)

Answers questions about dangers of lead in drinking water, gives techniques for reducing lead exposure.

Surface Water Education System (SURFWAT)

Importance, quantity, and distribution of surface water, and how it can become contaminated. Agricultural best management practices.

Alternatives for Unsewered Communities (UNSEWER)

Facilities planning for small communities: needs documentation, alternatives, selection, treatment management & implementation.

Wellhead Protection (WELLHEAD)

Public water supply protection. Planning team, wellhead protection area delineation, contaminant source inventory, management.

AGPP: Agricultural Pollution Prevention 1991 (DOS) 8Mb
www.epa.gov/seahome/agpp.html

BIF: RCRA Boiler & Industrial Furnace Regulations 1996 (DOS) 1.7Mb
www.epa.gov/seahome/bif.html

CAP: RCRA Corrective Action Process 1995 (DOS) 3.5 Mb
www.epa.gov/seahome/cap.html

CMAR: Municipal Pollution Prevention Diagnostic Planner 1992 (DOS) 3.3Mb
www.epa.gov/seahome/cmar.html

COMPRISK: Comparative Risk Assessment 1995 (DOS) 9.5Mb
www.epa.gov/seahome/comprisk.html

DECENT: Decentralized On-Site Management for Treatment of Domestic Wastes (WEB) 1999 2.5 Mb
www.epa.gov/seahome/decent.html

EACASE: Environmental Assessment Case Study 1997 (WIN) CDROM
www.epa.gov/seahome/eacase.html

EARG: Environmental Assessment Resource Guide 1993 (WIN) 40Mb
www.epa.gov/seahome/earg.html

ENERGY: Residential Energy Efficiency 1996 (Windows) 35Mb
www.epa.gov/seahome/energy.html

EROSION : Best Management Practices for Soil Erosion 1997 (WEB) 1.7Mb
www.epa.gov/seahome/erosion.html

FARMFERT : Fertilizer Storage and Handling Practices on the Farm 2001 (WEB) 0.9Mb
www.epa.gov/seahome/farmfert.html

FARMFUEL: Petroleum Storage Practices on the Farm 2001 (WEB) 1.3Mb
www.epa.gov/seahome/farmfuel.html

FARMHAZ: Hazardous Waste Management on the Farm 2001 (WEB) 1.6Mb
www.epa.gov/seahome/farmhaz.html

FARMPEST: Pesticide Storage and Handling Practices on the Farm 2001 (WEB) 1.1Mb
www.epa.gov/seahome/farmpest.html

FARMSITE: Soil and Geologic Site Evaluation 2001 (WEB) 0.9Mb
www.epa.gov/seahome/farmsite.html

FISH: Chemical Contamination in Fish 1997 (WIN) CDROM
www.epa.gov/ seahome/fish.html

GLADVENT: Great Lakes Adventure 1999 (Win or Mac) CDROM
www.epa.gov/seahome/gladvent.html

GRANTS: EPA Grant Writing Tutorial 1998 (WEB) 4.1Mb
www.epa.gov/seahome/grants.html

GWPRIMER: Ground Water Primer 1998 (WEB) HTML, 2.7Mb
www.epa.gov/seahome/gwprimer.html

HWASTE: Household Waste Management 1997 (WEB) HTML, 8Mb
www.epa.gov/seahome/hwaste.html

INDOOR: Indoor Air Quality 1995 (DOS) 7.5Mb
www.epa.gov/seahome/indoor.html

INJECT: UIC Class V Injection Wells 1999, 1.2Mb
www.epa.gov/seahome/inject.html

LANDSCP: Water Efficient Landscape Planner 1991(DOS) 2.1Mb
www.epa.gov/seahome/landscp.html

LEADDW: Lead in Drinking Water 1991 (DOS) 1.0Mb
www.epa.gov/seahome/leaddw.html

LEADENV: Lead in the Environment 1999 (WEB) 1.2Mb
www.epa.gov/seahome/leadenv.html

MANURE-STORE: Manure Storage & Handling on the Farm 2001 (WEB) 4.3Mb
www.epa.gov/seahome/manure-store.html

MANURE-HANDLE: Livestock Manure Handling on the Farm 2001 (WEB) 1.7Mb
www.epa.gov/seahome/manure-handle.html

MERCURY: Mercury in Medical Facilities 2001 (WEB) 6.0Mb
www.epa.gov/seahome/mercury.html

MILKING: Milking Center Wastewater Treatment 2001 (WEB) 1.4Mb
www.epa.gov/seahome/milking.html

OILSPILL: Oil Spill Exercise Generator 2001 (WIN) CD-ROM
www.epa.gov/seahome/oilspill.html

ONSITE: Principles & Design of Onsite Waste Disposal with Septic Systems 2001 (WEB) 1.0Mb
www.epa.gov/seahome/onsite.html

OZONE: Stratospheric Ozone Depletion 1995 (DOS) 6Mb
www.epa.gov/grtlakes/seahome/ozone.html

PESTREGS: 1995 Worker Protection Standard 1995 (DOS) 0.9Mb
www.epa.gov/seahome/pestregs.html

PREVENT: Pollution Prevention 1996 (DOS) 8.6Mb
www.epa.gov/seahome/prevent.html

PRIVATE: Private Water Systems 2001 (WEB) 2.2Mb
www.epa.gov/seahome/private.html

PRIVPEST: Private Pesticide Applicator Training 2001 (WIN) CD-ROM
www.epa.gov/seahome/privpest.html

SILAGE: Improving Silage Storage on the Farm 2001 (WEB) 0.3Mb
www.epa.gov/seahome/silage.html

SPANCON: Residential Water Conservation Techniques - Spanish Version 1991 (DOS) 3.2Mb
www.epa.gov/seahome/spancon.html

SPANFERT: Fertilizer Storage and Handling - Spanish Version 1993 (DOS) 1.2Mb
www.epa.gov/seahome/spanfert.html

SPANLAND: Water Efficient Landscape Planner - Spanish Version 1993 (DOS) 2.1Mb
www.epa.gov/seahome/spanland.html

SPANLEAD: Lead in the Environment - Spanish Version 1994 (DOS) 1.2Mb
www.epa.gov/seahome/spanlead.html

SPANPEST: Pesticide Storage & Handling - Spanish Version 1992 (DOS) 1.6Mb,
www.epa.gov/seahome/spanpest.html

SPANPRIV : Private Water Systems - Spanish Version 1993 (DOS) 5.6Mb
www.epa.gov/seahome/spanpriv.html

SURFWAT: Surface Water Education System 1992 (DOS) 3.6Mb
www.epa.gov/seahome/surfwat.html

TRILOGY: Environmental Planning for Small Communities 1998 (WIN) 40Mb
www.epa.gov/seahome/trilogy.html

UNSEWER: Alternatives for Unsewered Communities 1992 (DOS) 6.2Mb
www.epa.gov/seahome/unsewer.html

WATCON : Residential Water Conservation Techniques 2001 (WEB) 3.2Mb
www.epa.gov/seahome/watcon.html

WELLHEAD : Wellhead Protection 1994 (DOS) 3Mb
www.epa.gov/seahome/wellhead.html

WELLOC: Water Well Location and Condition on the Farm 2001 (WEB) 1.0Mb
www.epa.gov/seahome/welloc.html

WER : Water-Effect Ratio for Metals 1999 (WIN) 5.4Mb
www.epa.gov/seahome/wer.html

WETHERB: Electronic Wetlands Herbarium 1993 (WIN) 47Mb
www.epa.gov/seahome/wetherb.html

WQS: Water Quality Standards & Criteria 1999 (WIN) 6.2Mb
www.epa.gov/seahome/wqs.html

Complete List of SEA Programs

How to Get the EPA/Purdue Software

From our Web site: www.epa.gov/seahome

The SEAHOME Web site features downloadable versions of all our current software programs. We offer self-extracting compressed files (.exe for Windows and .zip for Mac users). If you experience problems downloading files during high traffic periods, please try again later. Direct questions or comments to reshkin.karen@epa.gov.

USEPA no longer fills diskette orders for the software. USEPA does not distribute the CD-ROMs.

On CD-ROM from Purdue University
Details at www.epa.gov/seahome/cdrom.html

Purdue University distributes the software on CD-ROM. There are 6 titles currently available. USEPA does not handle orders for the CDs; the only way to get a CD is from Purdue. Prices include postage and handling.

Discounts: There is a $15 discount when you order the three Environmental Hypermedia CDs. (i.e. Vols. I, II, and III) for $40 ($50 outside the US). There is a bulk discount when you order any five or more CDs to ship to one address. Contact the Farm Building Plan Service for more details.

To order CDs, send a check or money order payable to "Purdue University" to:

> **Farm Building Plan Service**
> **Agricultural & Biological Engineering**
> **1146 ABE Building Room 208**
> **Purdue University**
> **West Lafayette, IN 47907-1146**

Purdue regrets that they are unable to accommodate payments by electronic funds transfer (EFT) or credit card. All orders must be prepaid. Please direct questions about your order to Carol M. Sikler, phone (765) 494-1174, fax (765) 494-1356, e-mail: fbps@ecn.purdue.edu

TITLES AVAILABLE

Private Pesticide Applicator Training (2001)
$10 (USD $15 for orders outside the US)

Exploring the Great Lakes (1999) Student Edition or Teacher Edition
$10 (USD $15 for orders outside the US)

> The only way to get *Great Lakes Adventure*. Also includes the *Great Lakes Atlas*. Teacher's Edition includes a teacher's guide with worksheet and suggested activities, and the *Great Lakes Atlas*. Please specify which version you're ordering.

Environmental Hypermedia Programs, Volume III (1999)
$15 (USD $20 for orders outside the US)

> 20 programs, including CD-ONLY titles FISH, EACASE, and EARG. For complete contents, see www.epa.gov/seahome/cd-contents.html#vol3

Environmental Hypermedia Programs, Volume II, First Edition (1998)
$15 (USD $20 for orders outside the US)

> Contains 11 programs, three of which are available only on CD-ROM (FISH, EACASE and EARG). For complete contents, see www.epa.gov/seahome/cd-contents.html#vol2

Environmental Hypermedia Programs and Water Quality Models, Second Edition (1996)
$25 (USD $30 for orders outside the US)

> A reissue of Purdue's first CD-ROM from 1994. Contains over 50 programs, including modeling and calculator software, and the expanded version of WETHERB. For complete contents, see www.epa.gov/seahome/cd-contents.html#vol1